edition version 1.2
ING-2013

BloodLine

BloodLine

Devices for blood conservation and its deriva

Characteristics of this series represent the answer to all conservation exigeances: blood, plasma, platelets and red blood cells. kw has realized a very complete series of blood bank refrigerators, cold rooms, freezers, thawers, incubators and portable refrigerators, in order to satisfy requests of little and big blood transfusion centres for hospitals, care houses, analisys laboratories, surgery rooms, etc.

KW Bloodline® series refrigerators and freezers can be validated, following gmp rules, as regards T uniformity and stability.

Blood Banks KLAB-BBR

CONTROL NIA

Green ICE

KLAB-BBR 700V NIA
Blood Bank

Blood Banks Medical Project KBBR-KBPR

Green ICE

Antibacterial

KBBR 400V AC

KBBR 180V AC

Plasma Freezers -40°C -85°C PL - PLL

K54EPL/PLL
Plasma Freezer (-40°C/-80°C)

K60PL/PLL

Plasma Freezers -20°C -45°C

Green ICE

Many capacities available
(from 200 to 600 liters)

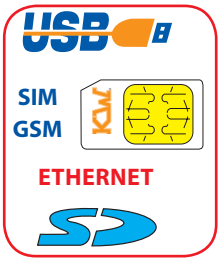
KBPF 600X PP
Plasma freezer

KBPF 600X PP/2D
Plasma freezer

Plasma Freezers -20°C -85°C - Biological Bank HPL - HPLL

TOTAL CONNECTIVITY
TOTAL TRACEABILITY
CONTROLLED ACCESS

7" TFT Display Touch Screen



NEW

CERTIFIED CLASS IIA MEDICAL DEVICE

HPL UltraSlim Freezers -40°C -85°C

NEW

SAVE SPACE IN YOUR LABORATOR!!!

Reduced Footprint

7" TFT Display Touch Screen

VIP PANEL

K58USHPL

Plasma Fast Freezers

KPFF 24B
Plasma Fast Freezing

KPFF 48B
Plasma Fast Freezing

Plasma Thawer/ Red Cell Warmer

WPFD - WSCFD 3/6

Platelet Incubator/Agitator

WR-KWAP+AGITATOR

BloodLine

Certified Medical Device Class IIA

Ultra Low temperature freezers
HPL LINE
(High Performance Line)

(TT) TOUCH TECNOLOGY

KW is always very innovative and gets inspiration by the news from informatics, electronics and thermodynamics.
KW has thought a controller with a technology based on micro processor ARM9, Dual Core, the same processor applied in smart-phones. It's name is **i-KW**.
I-KW works with operative system Linux and it's a true on–board computer. The new controller has a graphic interface, done with a touch screen **TFT DISPLAY**.
KW slogan is: ***let's put an iPad in our apparatus!***
This controller, not only is equipped with a more powerful processor and with much capacity of memory RAM, if compared to the previous models, it has an user interface so direct, that anyone will find it really user-friendly.

CONNECTIVITY, TRACEABILITY AND TOTAL SAFETY

Guarantying the maximum connectivity and traceability, i-KW is able to satisfy the requirements of the pharmaceutical industry and health laboratories, completely.
The ultra low temperature freezers HPL, with the new smart controller i-KW, **can have a full connectivity with the laboratory environmental, by means of: slot USB, slot SIM, Wi-Fi, Ethernet wired, and RS485 port with ModBus protocol.**

Above all, the Wi-Fi connection will make the HPL freezer visible in the LAN of the hospital or of the industrial laboratory.
From a PC workstation, connected in the same network as the freezer, through the browser, you can connect with the refrigeration unit by typing the IP address of the same.
Or, from any Internet terminal in the world will be able to connect to the refrigeration unit accessing the static IP address of the company, whose network is connected in the freezer, of course having the login credentials, which may be granted by the administrator corporate network.
The controller also warrants a full traceability, since the system continuously records, at high frequency, the functional data, bar codes, or other forms of coding, combining them with the freezing or cryo preservation process, etc. The user, without needing any specific SW, will be able to transfer the data to PC and/or to LAN in a very friendly way thanks to the standards which are developed in compliance with Windows. The smart controller i-KW has been designed to guarantee an integrated safety about all the functions, through the regulation and the management of the refrigeration power. The data recording complies with the most evolved standards, like GMP, JACIE, FACT, and so on. **There is also the availability of a temperature – time graphic, with no need to install a specific recorder.**

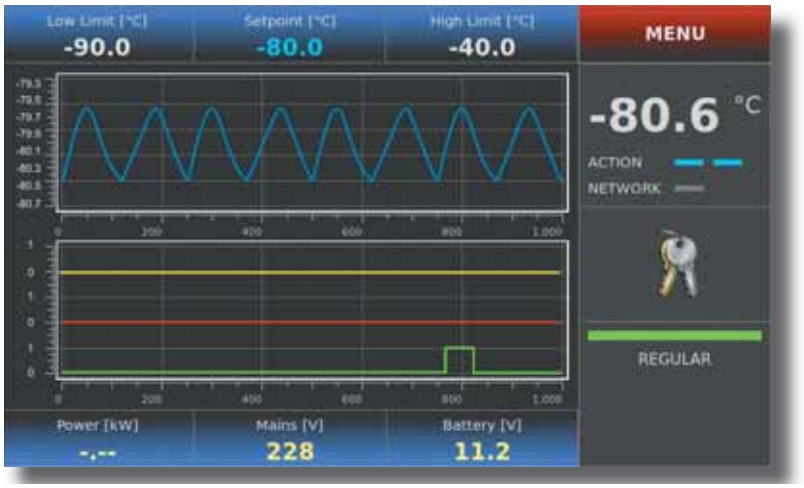
BloodLine

THE INNOVATION OF HUMAN INTERFACE

A true challenge to the common sense for dimensions, structure and possible information. I-KW is the new reference for the user interface and for the connectivity attached to the control of the temperature freezers, where a simple, intuitive and nice to see interface is combined with a sophisticated management of the refrigeration unit.

- Recording of the functional variables on SD card, in real time
- Menu sensitive to the fingering (touch) with many windows and with temperature graphics
- USB interface on the front panel to download the temperature recording and updating (SW-FW)
- Possibility of door opening, in safety (password) through touch button or transponder
- Italian, English, French, Spanish, German languages available

Badge KW



Instant termperature and alarm graphs and door opening

THE ACCESS CONTROL AND THE AIDED MAINTENANCE

The HPL freezers, equipped with the new i-KW controller, have a controlled access: it comes as standard the possibility to use an **electronic key** (alphanumerical code customized by the user) to put together with an electrical lock for a controlled door opening, or, as optional equipment, to use a **badge or transponder (or finger pass, with the finger print storage)**.
The new i-KW controller guarantees high use simplicity and an easy maintenance. The user will be able to arrange many tools which will teach him how to use them.

Think to the possibility to have a user guide on display and to scroll it as if it was a smart phone; and therefore to enjoy immediately an user manual, a start up sequence, or video files, which show the maintenance activities and so on.
Through the possibility for the manufacturer or the service engineer to connect by an IP address, and by a sequence of passwords (safety and traceability) to ask questions to the freezer status, or to modify the parameters, the freezer management can also happen from remote, with low costs and in very short time, with undoubted advantages for the failures preventing.
It will be possible to activate a telecare, with the mailing of instructions and recommendations on display, activating GSM function, by the slot for SIM.

BloodLine

Ultra Low temperature freezers
HPL LINE
(High Performance Line)

The new controller assures safer procedures, automatic recording of the data and shorter working time for the technician.
In fact it obtains the maximum saving for the procedures of freezing, storage, by the automatic writing of the introduced items, by the automatic recording of materials and thermal cycle, and their association. In this way it obtains to amend many errors and many not conformities of the laboratory processes, and in last analysis it gives a sensible saving of the indirect costs.

The control and recording of all the functional parameters, by the computer memory, guarantees a very high operative efficiency, allowing the measurements of the energy consumption and the actuation of the parameters useful for COP rising together with Green Ice project.
The user can display also the recording of electrical consumption.
New functions and an arrangement to future updating

INTERACTIVE
ENERGY SAVING

About energy saving, the smart controller i-KW has new functions:

ECO MODE
allows raising the temperature set during the night hours with a pre-definite value (settable by the user or by the manufacturer)

ENERGY SAVING
allows, when the percentage of the compressor use reaches a pre definite value, to raise the temperature set point, temporarily and automatically, with a pre definite value (settable by the user or by the manufacturer). The restore, at the pre definite conditions, happens automatically.
These two new functions allow to integrate themselves to those offered by NIA system and to aid the energy saving and the reduction of the global warming, with a smaller not direct CO2 emission in the atmosphere.
The energy saving is at least -15%, in comparison with a standard ultra low freezer, only through Night Mode and Eco Mode.
Besides, the new controller is equipped to accept future updating easily and at low costs, so it'll be able to adapt itself to the new technological innovations and to response to the raising requirements from the rules and the directives in pharmaceutical and health field.
Smart controller i-KW is the last stage of the art for the control system of the ultra low temperature freezers.

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User panel

STRUCTURE: the external cabinet is a plasticized, zinc-plated (or enamelled) steel sheet with rounded edges for maximum ergonomics; Internal casing in AISI 304 stainless steel (or AISI 316 upon request) with rounded angles for easy cleaning; n.4 insulated internal counter doors (n.5 upon request) for upright models; the handle has an ergonomic design and key lock; pivoting wheels to facilitate transportation and placement inside the laboratory; not heated pressure-compensation valve
to facilitate the operation of opening the door, Insulation is in CFC- and HCFC-free polyurethane resin foamed on site, with a density of 40 Kg. /m3 and with an average thickness of 140 mm or more. **(It's available V.I.P. solution)**
KUB75 and K66 models have – standard - polyurethane resin foamed on site and embedded V.I.P. panels
Gaskets: triple silicone rubber seal, welded joints, heated by the refrigerant itself and with virtually unlimited duration.

REFRIGERATION SYSTEM AT -85°C: the refrigeration system is fully sealed; it uses a cascade circuit with innovative components and fluids to obtain, together, maximum cooling reliability and performance; 2 silent, airtight compressors (value Leq dB (A) <55) with a high refrigeration capacity; the refrigerants are nontoxic, non-flammable, non-explosive and environmentally friendly. the condensation is obtained with forced air circulation; on request, water condenser.
The freezers at -40°C have the same construction characteristics as those of the HPL series at -85°C, with the exception of the second system in cascade.
Voltage stabilizer: 4,000-VA voltage regulation, capable of compensating the fluctuations of the utility power supply (± 15%), protecting the compressors and guaranteeing a long useful life.

Customized temperature limits

COMPLETELY CUSTOMIZED

SAFETY - Customized password protection

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Certified Medical Device Class IIA

Ultra Low temperature freezers
HPL LINE
(High Performance Line)

Display to set and to read the temperature:

i–KW video – graphic interface is a color touch screen display 7" TFT; micro processor ARM9 technology , the same processor used in the smart phones, which functions with Linux operative system; menu sensitive to the fingering with many windows and with temperature graphics; system available in 5 languages: Italian, English, German, French, Spanish.

- Controller startup and shutdown: access protected by electronic key with password

SD

USB

SIM GSM

ETHERNET

Display	TFT Touch screen 7.0" wide
Power supply	from Power Board
Dimensions	197x122x50 mm
Front ports	USB - Slot per SIM Card e SD Card
Ports	Ethernet
Slot	for modem GSM
CPU	Atmel® at91 sam9261 256 Mb flash
	Operating System Linux 2.6.33

CONTROL SYSTEM:

control, recording, supervision, full traceability of all the parameters and the events, full connectivity to the environmental, very high safety about the operations and the accesses. **2-ch monitoring kit with two independent RTD Pt 100 Ω (class A) sensors**; one for the regulation and one for the temperature alarm and for automatic recording of the temperature and the alarms; recording in real time of all the functional variables on SD card and on USB port; this last part on the front panel to download data of thermal recording and for updating; registration in SQL format for easy reading by dedicated software **KW80CRC TRACER**; **Pb or Ni-MH backup battery; and battery recharge circuit.**

- Set point and alarm limits change: controlled change through an electronic key, with password against violations, accidental handlings, and for the best traceability.

- Access to the menu, with sensible data and parameters: controlled access to SW parameters, by electronic key, for the maximum security and in compliance with laboratory rules and standard.

- All data are continously recorded on SD card and on USB Port.

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ALARMS:
temperature alarm system fully independent with the regulation control; **reading of alarm probe by 2nd micro processor on the electronic board:** visual and acoustic alarm for power failure, door opening, high condenser pressure, battery alarm, damaged probe/s, compressors time, high temperature condenser, clogged condenser; for any temperature alarm, automatic recording (high T, low T) black out, critical alarm temperature, month/day/hour/minute of the alarm start; month/day/hour/minute of the alarm end.

- Door opening:
n° daily openings, n° critical openings, total opening time are all recorded in the memory
List of the monitored failures: damage of T probe, compressor time, dirty condenser, high condenser T, power failure, thermal protection, damaged plant probe

- Safety control:
the freezer continues to run a timed thermo stabilization with compressor on/off times collected before the sensor(s) broke down.

Disaster recovery:
in the event the CPU is destroyed, it allows cycling the functions on the remote unit, with the exception of data visualization, that is, the freezer continues working with average on/off times recorded before the failure.

Info test:
executes functional tests for the biological freezer, with report printing if necessary, without engaging external devices.

Enviromental adaptability: the condenser vents are managed separately by means of a sensor; **condenser fan speed modulation within a band of temperatures.**

Energy saving, activating the under mentioned functions, it's possible save over 15% energy in respect of the freezer with standard controllers – **GREEN ICE SOLUTIONS**; economic management of the consumptions

- **ECO MODE**:
during the night, when the user procedures and stored product so permit it is possible to raise the set temperature by a predefined value, thereby obtaining important energy savings.

- **ENERGY SAVING**
this reduces the consumption rates of the refrigerating unit as soon as the compressor use percentage reaches a predefined value. In this condition, the operating set point is temporarily and automatically increased by a value preset by the user; resetting takes place automatically at the defined conditions.

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Ultra Low temperature freezers
HPL LINE
(High Performance Line)

48 Hours!!

Up to 48 hours of temperature data logging on SD CARD in case of energy black out

The control system uses 8 AA Ni-MH rechargeable batteries

GSM: optional, every i-KW80, can have a GSM form, becoming an independent unit, which transmits and receives SMS on own phone number, towards the recorded users;
RS 485 Modbus RTU: is present – standard- a RS485 port with Modbus RTU protocol, oriented to the serial communication of i-KW80 towards systems of supervision, compatible with this protocol;
Bar code reader: optional; for the registered samples equipped with a bar code;
Dry contacts: remote management of the alarm signals;
Human interface: user guide on display; files (also video) with maintenance programs on display; maintenance KW program: informs about periodic operations recommended for the maximum reliability of the freezer and for the minimum energy consumption;
Recording (standard): with data logger function and the possibility to display the temperature - time graphic on display touch screen;

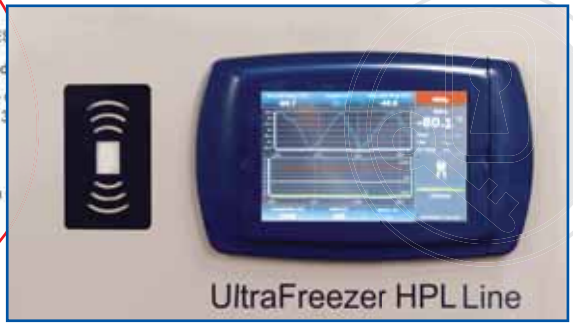
ETHERNET PEER TO PEER WIRED: by a configuration of PPP type, many i-KW80 controllers can be connected in a same network. This configuration allows the supervision per single address IP from PC in the network , by a browser with the display of the HTML pages, pre installed in every single terminal;
WI-FI: through the WI-FI form, optional, the i-KW units can be connected in wireless network , in the environmental where an access point is present (Router WI-FI) or **through router connected directly;**

Ethernet or WIFI connectivity

BloodLine

Plasma UltraFreezers -40°C -85°C

HPL LINE



7" TFT DISPLAY

K60HPL
UltraFreezer
(-40°C/-85°C)

CERTIFIED MEDICAL DEVICE CLASS IIA

BloodLine

Freezers -40°C -85°C

HPL

(High Performance Line)

KW -80°C PLASMA FREEZER SERIES HPL MEDICAL DEVICE DIRECTIVE 2007/47					
VERTICAL MODELS HPL -80°C	KUB75 V.I.P.	K57	K56	K568	K58
External dimensions (WxDxH)	cm97x58x78	cm80x79x132	cm80x79x188	cm85x78x199	cm96x80x188
Internal dimensions (WxDxH)	cm42x35x58	cm50x45x54	cm50x45x111	cm60x45x128	cm70x46x111
Set Point	-80°C	-80°C	-80°C	-80°C	-80°C
Working range	-40°C -85°C	-40°C -85°C	-40°C -85°C	-40°C -85°C	-40°C -85°C
Capacity (litres)	85	125	250	351	354
Pre painted steel closed doors	1	1	1	1	1
Shelves/inner doors	2/1	2/2	4/4	4/4	4/4
Weight Kg	100	200	260	260	290
Internal surfaces standard	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet
External surfaces standard	Prepainted steel	Prepainted steel	Prepainted steel	Prepainted steel	Prepainted steel
Insulation thickness	130mm	150mm	140mm	140mm	140mm
Key Lock	ST	ST	ST	ST	ST
4 wheels (2 with brake)	ST	ST	ST	ST	ST
(*) Controller HPL (display Touch Screen, Smart defrost, HT, LT, BLACK OUT, failure list, door open, switching on/off password, alarm memory, alarm test, SAFETY CONTROL, DISASTER RECOVERY, key alarm test, USB port, WI.FI, Ethernet wired)					
Controller HPL (*)	ST	ST	ST	ST	ST
N°2 PT100 probe(-40°C/-130°C Class A)	ST	ST	ST	ST	ST
RS485, USB Port and SD Card	ST	ST	ST	ST	ST
SW KW TRACER	ST	ST	ST	ST	ST
AVAILABLE ACCESSORIES					
Internal AISI 316 surfaces	√	√	√	√	√
External AISI 304 o AISI 316 surfaces	√	√	√	√	√
V.I.P. (vacuum insulation panel)	ST	√	√	√	√
N.° inox drawers H100 mm	NO	(√)4	(√)8	(√)8	(√)8
N.° inox drawers H200 mm	NO	(√)2	(√)4	(√)4	(√)4
Rack/Cak/COS	√	√	√	√	√
Additional shelves	√	√	√	√	√
Kit back up CO2 (24Vac/50Hz)	√	√	√	√	√
Kit back up LN2 (24Vac/50Hz)	√	√	√	√	√
Opening door by transponder personal key	√	√	√	√	√
Electrical key	√	√	√	√	√
Temperature recorder	√	√	√	√	√
GSM Port	√	√	√	√	√
Emergency plant CO2 (12Vac/25Hz) with temperature indipendent regulator	√	√	√	√	√
Additional PT100 probe (free contacts for external data management system: data logger wireless etc.)	√	√	√	√	√
Data logger WIFI+software/hardware (temperature management Spy KW)	√	√	√	√	√
Voltage stabilizer ± 35V (±15%)	√	√	√	√	√
IQ/QQ/ecc.	√	√	√	√	√
Water condenser	NO	NO	√	√	√
Internal - external hole	√	√	√	√	√

√	OPTIONAL
ST	STANDARD
NO	Not Available

BloodLine

Freezers -40°C -85°C

HPL

(High Performance Line)

KW -80°C PLASMA FREEZER SERIES HPL MEDICAL DEVICE DIRECTIVE 2007/47							
K60	K62	K64	K66	K58-2D	K60-2D	K62-2D	K66-2D
cm97x96x184	cm106x90x199	cm106x100x199	cm110x103x199	cm97x80x199	cm97x97x199	cm106x100x199	cm110x103x199
cm70x65x111	cm80x59x128	cm80x69x128	cm85x73x130	cm72x46x109	cm72x65x109	cm82x69x109	cm85x73x130
-80°C	-80°C	-80°C	-80°C	-80°C	-80°C	-80°C	-80°C
-40°C -85°C	-40°C -85°C	-40°C -85°C	-40°C -85°C	-40°C -85°C	-40°C -85°C	-40°C -85°C	-40°C -85°C
505	604	706	806	354	505	604	704
1	1	1	1	2	2	2	2
4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4
320	330	350	450	290	320	330	450
AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet
Prepainted steel	Prepainted steel	Prepainted steel	Prepainted steel	Prepainted steel	Prepainted steel	Prepainted steel	Prepainted steel
140mm	140mm	140mm	140mm	140mm	140mm	140mm	140mm
ST	ST	ST	ST	ST	ST	ST	ST
ST	ST	ST	ST	ST	ST	ST	ST
(*) Controller HPL (display Touch Screen, Smart defrost, HT, LT, BLACK OUT, failure list, door open, switching on/off password, alarm memory, alarm test, SAFETY CONTROL, DISASTER RECOVERY, key alarm test, USB port, WI.FI, Ethernet wired)							
ST	ST	ST	ST	ST	ST	ST	ST
ST	ST	ST	ST	ST	ST	ST	ST
ST	ST	ST	ST	ST	ST	ST	ST
ST	ST	ST	ST	ST	ST	ST	ST
√	√	√	√	√	√	√	√
√	√	√	√	√	√	√	√
√	√	√	ST	√	√	√	ST
(√)8	(√)8	(√)8	(√)8	(√)8	(√)8	(√)8	(√)8
(√)4	(√)4	(√)4	(√)4	(√)4	(√)4	(√)4	(√)4
√	√	√	√	√	√	√	√
√	√	√	√	√	√	√	√
√	√	√	√	√	√	√	√
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√	√	√	√	√	√	√	√
√	√	√	√	√	√	√	√
√	√	√	√	√	√	√	√
√	√	√	√	√	√	√	√

√	OPTIONAL
ST	STANDARD
NO	Not Available

BloodLine

Freezers -40°C -85°C

HPL - Ultra Slim

(High Performance Line)

NEW

K58USHPL

√ **SAVE SPACE IN YOUR LABORATOR**

√ **WORK WITH TOUCH TECNOLOGY:** easy, traceable, with built-in recording system, for easy maintenance at any time, updatable with a simple message

√ **ERGONOMIC AND EASY TO USE AS A LAST GENERATION SMARTPHONE**

√ **SAVE ENERGY** with touch technology HPL through special thermodynamic functions **(GREEN ICE project)**

√ **YOUR FREEZER ALWAYS CONNECTED WITH YOU WHEREVER YOU ARE, ALWAYS IN CONTROL OF YOUR SAMPLES WITH JUST A TOUCH OF PC**

KW Apparecchi Scientifici offers models with **VIP** panels to save energy (up to 20% less - **GREEN ICE project**), while maintaining the same footprint.

VIP PANEL

Now **KW** has developed and will develop new innovative models:

-**ULTRA SLIM** models with Vacuum Insulation Panel Technology: high insulation material with extremely low thermal conductivity and consequently very low thermal transitivity (U-value).
Main components of VIP panels are silica based core and multi layer high-banner film, which keeps vacuum inside the panel on the sufficient level for more than 50 years.

Energy-efficient, quiet running and reliable, **HPL SLIM KW** freezers use space-saving Vacuum Insulation Panel technology to reduce **wall thickness (only 90 mm.) for a significant increase in storage capacity (over 35%), with the same footprint.**

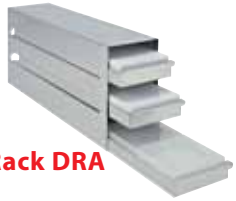
CERTIFIED MEDICAL DEVICE CLASS IIA

BloodLine

Freezers -40°C -85°C

HPL - Ultra Slim

KW -85°C PLASMA FREEZER SERIES HPL ULTRA SLIM MD DIRECTIVE 2007/47			
MODELS HPL ULTRA SLIM -80°C	K58US HPL	K62US HPL	K66US HPL
External dimensions (WxDxH)	cm75x87x190	cm86x107x190	cm99x114x199
Internal dimensions (WxDxH)	cm49x60x125	cm60x80x125	cm73x87x134
Set Point	-80°C	-80°C	-80°C
Working range	-40°C -85°C	-40°C -85°C	-40°C -85°C
Capacity (litres)	354	604	806
Pre painted steel closed doors	1	1	1
Shelves/inner doors	4	4	4
Weight Kg	280	320	440
Internal surfaces standard	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet
External surfaces standard	Prepainted steel	Prepainted steel	Prepainted steel
Insulation thickness	90mm	90mm	90mm
Key Lock	ST	ST	ST
4 wheels (2 with brake)	ST	ST	ST
(*) Controller HPL (display Touch Screen, Smart defrost, HT, LT, BLACK OUT, failure list, door open, switching on/off password, alarm memory, alarm test, SAFETY CONTROL, DISASTER RECOVERY, key alarm test, USB port, WI.FI, Ethernet wired)			
Controller HPL (*)	ST	ST	ST
N°2 PT100 probe(-40°C/-130°C Class A)	ST	ST	ST
RS485, USB Port and SD Card	ST	ST	ST
SW KW TRACER	ST	ST	ST
AVAILABLE ACCESSORIES			
Internal AISI 316 surfaces	√	√	√
External AISI 304 o AISI 316 surfaces	√	√	√
V.I.P. (vacuum insulation panel)	ST	ST	ST
Rack/Cak/COS	√	√	√
Additional shelves	√	√	√
Kit back up CO2 (24Vac/50Hz)	√	√	√
Kit back up LN2 (24Vac/50Hz)	√	√	√
Opening door by transponder personal key	√	√	√
Electrical key	√	√	√
Temperature recorder	√	√	√
GSM Port	√	√	√
Emergency plant CO2 (12Vac/25Hz)	√	√	√
Additional PT100 probe	√	√	√
Data logger WIFI+software/hardware (temperature management Spy KW)	√	√	√
Voltage stabilizer ± 35V (±15%)	√	√	√
IQ/QQ/ecc.	√	√	√
Water condenser	NO	NO	NO
Internal - external hole	√	√	√



Rack DRA

- **K58USHPL** - effective capacity over 360 liters or 2" (h= 5 cm.) boxes n. **240**
- **K62USHPL** - effective capacity over 600 liters or 2" (h= 5 cm.) boxes n. **400**
- **K66USHPL** - effective capacity over 800 liters or 2" (h= 5 cm.) boxes n. **600**

- the boxes are stored in special racks with extraction front to save the cold and exposing the minimum amount of samples to the momentary heating
- **2 standard internal insulated doors to save the cold**
- also available , on request, 3 or 4 internal insulated doors to prevent the exit of cold air (GREEN ICE project)
- 4 standard stainless steel AISI 304 shelves
- Triple seal with silicone rubber with a lifetime guarantee

For the rest, the structure has the same materials and the same technical features as any other ultra low temperature freezer branded KW. And this serie has the same accessories of the other ULT freezers branded KW.

BloodLine

CERTIFIED MEDICAL DEVICE CLASS IIA

Freezers -40°C -85°C

HPL

(High Performance Line)

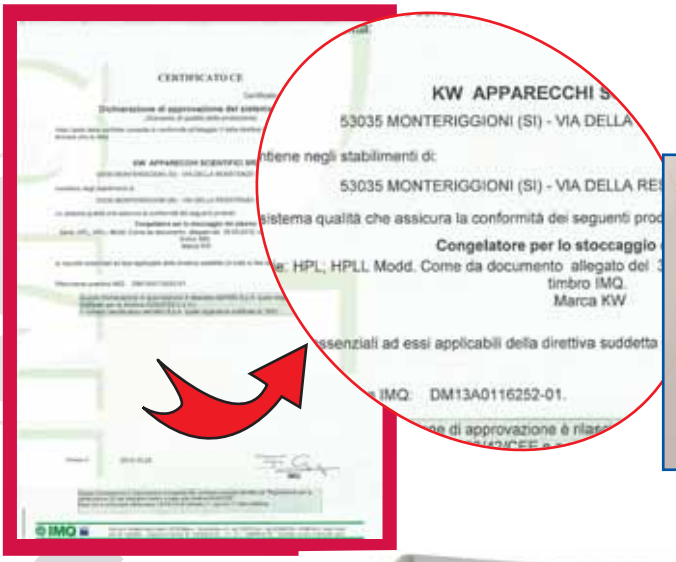
KW -80°C PLASMA FREEZER SERIES HPL MEDICAL DEVICE DIRECTIVE 2007/47							
HORIZONTAL MODELS HPL -80°C	K52	K52E	K54	K54E	K55	K55E	K5578
External dimensions (WxDxH)	cm90x100x124	cm90x100x124	cm150x86x124	cm150x86x124	cm195x88x112	cm256x86x117	cm249x96,5x112
Internal dimensions (WxDxH)	cm55x40x50	cm63x48x55	cm115x40x50	cm123x48x55	cm122x52x75	cm180x50x78	cm176x59,5x75
Set Point	-80°C	-80°C	-80°C	-80°C	-80°C	-80°C	-80°C
Working range	-40°C -85°C	-40°C -85°C	-40°C -85°C	-40°C -85°C	-40°C -85°C	-40°C -85°C	-40°C -85°C
Capacity (litres)	110	170	230	330	480	702	785
Pre painted steel closed doors	1	1	1	1	1	1	1
Shelves/inner doors	-	-	-	-	-	-	-
Weight Kg	130	140	290	300	350	440	440
Internal surfaces standard	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet
External surfaces standard	Prepainted steel	Prepainted steel	Prepainted steel	Prepainted steel	Prepainted steel	Prepainted steel	Prepainted steel
Insulation thickness	175mm	140mm	175mm	140mm	140mm	140mm	140mm
Key Lock	ST	ST	ST	ST	ST	ST	ST
4 wheels (2 with brake)	ST	ST	ST	ST	ST	ST	ST
(*) Controller HPL (display Touch Screen, Smart defrost, HT, LT, BLACK OUT, failure list, door open, switching on/off password, alarm memory, alarm test, SAFETY CONTROL, DISASTER RECOVERY, key alarm test, USB port, WI.FI, Ethernet wired)							
Controller HPL (*)	ST	ST	ST	ST	ST	ST	ST
N°2 PT100 probe(-40°C/-130°C Class A)	ST	ST	ST	ST	ST	ST	ST
RS485, USB Port and SD Card	ST	ST	ST	ST	ST	ST	ST
SW KW TRACER	ST	ST	ST	ST	ST	ST	ST
AVAILABLE ACCESSORIES							
Internal AISI 316 surfaces	√	√	√	√	√	√	√
External AISI 304 o AISI 316 surfaces	√	√	√	√	√	√	√
Rack/Cak/COS	√	√	√	√	√	√	√
Kit back up CO2 (24Vac/50Hz)	√	√	√	√	√	√	√
Kit back up LN2 (24Vac/50Hz)	√	√	√	√	√	√	√
Emergency plant CO2 (12Vac/25Hz) with temperature indipendent regulator	√	√	√	√	√	√	√
Opening door by transponder personal key	√	√	√	√	√	√	√
Electrical key	√	√	√	√	√	√	√
Temperature recorder	√	√	√	√	√	√	√
GSM port	√	√	√	√	√	√	√
Additional PT100 probe (free contacts for external data management system: data logger wireless etc.)	√	√	√	√	√	√	√
Data logger WIFI+software/hardware (temperature management Spy KW)	√	√	√	√	√	√	√
Voltage stabilizer ± 35V (±15%)	√	√	√	√	√	√	√
IQ/QQ/ecc.	√	√	√	√	√	√	√
Water condenser	NO	NO	√	√	√	√	√
Internal - external hole	√	√	√	√	√	√	√

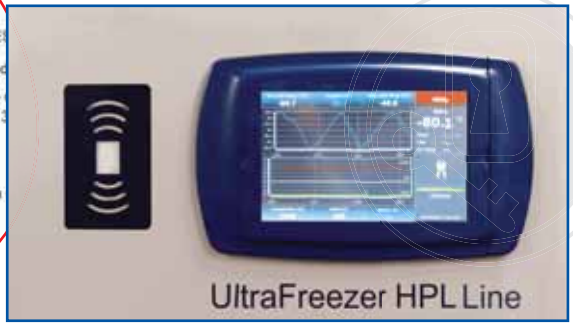
√	OPTIONAL
ST	STANDARD
NO	Not Available

BloodLine

Plasma Freezers -20°C -50°C

HPLL LINE





7" TFT DISPLAY

K4060HPLL
Freezer
(-20°C/-50°C)

CERTIFIED MEDICAL DEVICE CLASS IIA

BloodLine

Plasma Freezers -20°C -50°C

HPLL

(High Performance Line)

KW -40°C PLASMA FREEZER SERIES HPLL MEDICAL DEVICE DIRECTIVE 2007/47						
VERTICAL MODELS HPLL -40°C	KUB4075	K4057	K4056	K40568	K4058	K4060
External dimensions (WxDxH)	cm97x58x78	cm80x79x132	cm80x79x188	cm85x78x199	cm96x80x188	cm97x96x184
Internal dimensions (WxDxH)	cm42x35x58	cm50x45x54	cm50x45x111	cm60x45x128	cm70x46x111	cm70x65x111
Set Point	-40°C	-40°C	-40°C	-40°C	-40°C	-40°C
Working range	-20°C -50°C	-20°C -50°C	-20°C -50°C	-20°C -50°C	-20°C -50°C	-20°C -50°C
Capacity (litres)	85	125	250	351	354	505
Pre painted steel closed doors	1	1	1	1	1	1
Shelves/inner doors	2/1	2/2	4/4	4/4	4/4	4/4
Weight Kg	100	200	260	260	290	300
Internal surfaces standard	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet
External surfaces standard	Prepainted steel	Prepainted steel	Prepainted steel	Prepainted steel	Prepainted steel	Prepainted steel
Insulation thickness	130mm	150mm	140mm	140mm	140mm	140mm
Key Lock	ST	ST	ST	ST	ST	ST
4 wheels (2 with brake)	ST	ST	ST	ST	ST	ST
(*) Controller HPL (display Touch Screen, Smart defrost, HT, LT, BLACK OUT, failure list, door open, switching on/off password, alarm memory, alarm test, SAFETY CONTROL, DISASTER RECOVERY, key alarm test, USB port, WI.FI, Ethernet wired)						
Controller HPL (*)	ST	ST	ST	ST	ST	ST
N°2 PT100 probe(-40°C/-130°C Class A)	ST	ST	ST	ST	ST	ST
RS485, USB Port and SD Card	ST	ST	ST	ST	ST	ST
SW KW TRACER	ST	ST	ST	ST	ST	ST
AVAILABLE ACCESSORIES						
Internal AISI 316 surfaces	√	√	√	√	√	√
External AISI 304 o AISI 316 surfaces	√	√	√	√	√	√
V.I.P. (vacuum insulation panel)	ST	√	√	√	√	√
N.° inox drawers H100 mm	NO	(√)4	(√)8	(√)8	(√)8	(√)8
N.° inox drawers H200 mm	NO	(√)2	(√)4	(√)4	(√)4	(√)4
Rack/Cak/COS	√	√	√	√	√	√
Additional shelves	√	√	√	√	√	√
Kit back up CO2 (24Vac/50Hz)	√	√	√	√	√	√
Kit back up LN2 (24Vac/50Hz)	√	√	√	√	√	√
Emergency plant CO2 (12Vac/25Hz)	√	√	√	√	√	√
with temperature indipendent regulator						
Opening door by transponder personal key	√	√	√	√	√	√
Electrical key	√	√	√	√	√	√
Temperature recorder	√	√	√	√	√	√
Additional PT100 probe	√	√	√	√	√	√
GSM Port	√	√	√	√	√	√
Data logger WIFI+software/hardware (temperature management Spy KW)	√	√	√	√	√	√
Voltage stabilizer ± 35V (±15%)	√	√	√	√	√	√
IQ/QQ/ecc.	√	√	√	√	√	√
Water condenser	NO	NO	√	√	√	√
Internal - external hole	√	√	√	√	√	√

√	OPTIONAL
ST	STANDARD
NO	Not Available

BloodLine

Plasma Freezers -20°C -50°C

HPLL

(High Performance Line)

KW -40°C PLASMA FREEZER SERIES HPL MEDICAL DEVICE DIRECTIVE 2007/47							
VERTICAL MODELS HPLL -40°C	K4062	K4064	K4066	K4058-2D	K4060-2D	K4062-2D	K4066-2D
External dimensions (WxDxH)	cm106x90x199	cm106x100x199	cm110x103x199	cm97x80x199	cm97x97x199	cm106x100x199	cm110x103x199
Internal dimensions (WxDxH)	cm80x59x128	cm80x69x128	cm85x73x130	cm72x46x109	cm72x65x109	cm82x69x109	cm85x73x130
Set Point	-40°C	-40°C	-40°C	-40°C	-40°C	-40°C	-40°C
Working range	-20°C -50°C	-20°C -50°C	-20°C -50°C	-20°C -50°C	-20°C -50°C	-20°C -50°C	-20°C -50°C
Capacity (litres)	604	706	806	354	505	604	704
Pre painted steel closed doors	1	1	1	2	2	2	2
Shelves/inner doors	4/4	4/4	4/4	4/4	4/4	4/4	4/4
Weight Kg	300	310	400	290	320	330	450
Internal surfaces standard	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet
External surfaces standard	Prepainted steel	Prepainted steel	Prepainted steel	Prepainted steel	Prepainted steel	Prepainted steel	Prepainted steel
Insulation thickness	140mm	140mm	140mm	140mm	140mm	140mm	140mm
Key Lock	ST	ST	ST	ST	ST	ST	ST
4 wheels (2 with brake)	ST	ST	ST	ST	ST	ST	ST
(*) Controller HPL (display Touch Screen, Smart defrost, HT, LT, BLACK OUT, failure list, door open, switching on/off password, alarm memory, alarm test, SAFETY CONTROL, DISASTER RECOVERY, key alarm test, USB port, WI.FI, Ethernet wired)							
Controller HPL (*)	ST	ST	ST	ST	ST	ST	ST
N°2 PT100 probe	ST	ST	ST	ST	ST	ST	ST
RS485, USB Port and SD Card	ST	ST	ST	ST	ST	ST	ST
SW KW TRACER	ST	ST	ST	ST	ST	ST	ST
AVAILABLE ACCESSORIES							
Internal AISI 316 surfaces	√	√	√	V	√	√	√
External AISI 304 o AISI 316 surfaces	√	√	√	√	√	√	√
V.I.P. (vacuum insulation panel)	√	√	√	√	√	√	√
N.° inox drawers H100 mm	(√)8	(√)8	(√)8	(√)8	(√)8	(√)8	(√)8
N.° inox drawers H200 mm	(√)4	(√)4	(√)4	(√)4	(√)4	(√)4	(√)4
Rack/Cak/COS	√	√	√	√	√	√	√
Additional shelves	√	√	√	√	√	√	√
Kit back up CO2 (24Vac/50Hz)	√	√	√	√	√	√	√
Kit back up LN2 (24Vac/50Hz)	√	√	√	√	√	√	√
Emergency plant CO2 (12Vac/25Hz)	√	√	√	√	√	√	√
with temperature indipendent regulator							
Opening door by transponder personal key	√	√	√	√	√	√	√
Electrical key	√	√	√	√	√	√	√
Temperature recorder	√	√	√	√	√	√	√
Additional PT100 probe	√	√	√	√	√	√	√
GSM Port	√	√	√	√	√	√	√
Data logger WIFI+software/hardware (temperature management Spy KW)	√	√	√	√	√	√	√
Voltage stabilizer ± 35V (±15%)	√	√	√	√	√	√	√
IQ/QQ/ecc.	√	√	√	√	√	√	√
Water condenser	√	√	√	√	√	√	√
Internal - external hole	√	√	√	√	√	√	√

√	OPTIONAL
ST	STANDARD
NO	Not Available

BloodLine

CERTIFIED MEDICAL DEVICE CLASS IIA

Plasma Freezers -20°C -50°C

HPLL

(High Performance Line)

KW -40°C PLASMA FREEZER SERIES HPLL MEDICAL DEVICE DIRECTIVE 2007/47							
HORIZONTAL MODELS HPLL -40°C	K4052	K4052E	K4054	K4054E	K4055	K4055E	K405578
External dimensions (WxDxH)	cm90x75x124	cm90x75x124	cm150x75x124	cm150x75x124	cm195x88x112	cm256x86x117	cm249x96,5x112
Internal dimensions (WxDxH)	cm50x40x50	cm63x48x55	cm115x40x50	cm124x49x55	cm122x52x75	cm180x50x78	cm176x59,5x75
Set Point	-40°C	-40°C	-40°C	-40°C	-40°C	-40°C	-40°C
Working range	-20°C -50°C	-20°C -50°C	-20°C -50°C	-20°C -50°C	-20°C -50°C	-20°C -50°C	-20°C -50°C
Capacity (litres)	110	170	230	330	480	702	785
Pre painted steel closed doors	1	1	1	1	1	1	1
Shelves/inner doors	-	-	-	-	-	-	-
Weight Kg	130	140	290	300	350	440	440
Internal surfaces standard	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet
External surfaces standard	Prepainted steel	Prepainted steel	Prepainted steel	Prepainted steel	Prepainted steel	Prepainted steel	Prepainted steel
Insulation thickness	175mm	140mm	175mm	140mm	140mm	140mm	140mm
Key Lock	ST	ST	ST	ST	ST	ST	ST
4 wheels (2 with brake)	ST	ST	ST	ST	ST	ST	ST
(*) Controller HPL (display Touch Screen, Smart defrost, HT, LT, BLACK OUT, failure list, door open, switching on/off password, alarm memory, alarm test, SAFETY CONTROL, DISASTER RECOVERY, key alarm test, USB port, WI.FI, Ethernet wired)							
Controller HPL (*)	ST	ST	ST	ST	ST	ST	ST
N°2 PT100 probe(-40°C/-130°C Class A)	ST	ST	ST	ST	ST	ST	ST
RS485, USB Port and SD Card	ST	ST	ST	ST	ST	ST	ST
SW KW TRACER	ST	ST	ST	ST	ST	ST	ST
AVAILABLE ACCESSORIES							
Internal AISI 316 surfaces	√	√	√	√	√	√	√
External AISI 304 o AISI 316 surfaces	√	√	√	√	√	√	√
Rack/Cak/COS	√	√	√	√	√	√	√
Kit back up CO2 (24Vac/50Hz)	√	√	√	√	√	√	√
Kit back up LN2 (24Vac/50Hz)	√	√	√	√	√	√	√
Emergency plant CO2 (12Vac/25Hz) with temperature indipendent regulator	√	√	√	√	√	√	√
Opening door by transponder personal key	√	√	√	√	√	√	√
Electrical key	√	√	√	√	√	√	√
Temperature recorder	√	√	√	√	√	√	√
GSM port	√	√	√	√	√	√	√
Additional PT100 probe (free contacts for external data management system: data logger wireless etc.)	√	√	√	√	√	√	√
Data logger WIFI+software/hardware (temperature management Spy KW)	√	√	√	√	√	√	√
Voltage stabilizer ± 35V (±15%)	√	√	√	√	√	√	√
IQ/QQ/ecc.	√	√	√	√	√	√	√
Water condenser	NO	NO	√	√	√	√	√
Internal - external hole	√	√	√	√	√	√	√

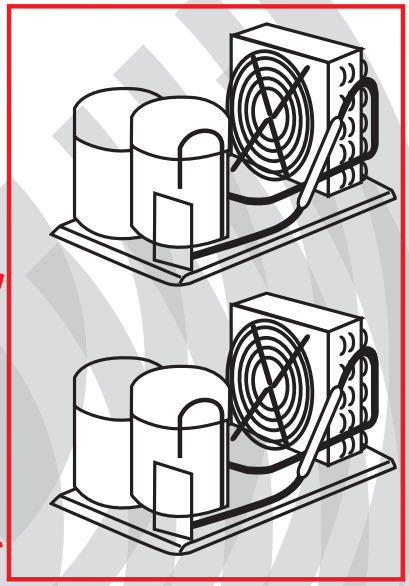
√	OPTIONAL
ST	STANDARD
NO	Not Available

BloodLine

Biological Bank

HPL LINE

7" TFT DISPLAY



K66s HPL 2D
Ultra Freezer (-40°C/-80°C)

BIOLOGICAL BANK - In case of the two systems fails (either the thermal fluid dynamics or electrical portion), an internal control system signals the event with (permanent) visual and sound alarms and excludes the damaged system: this allows to comfortably fix the damage, not having to rush the repair and at the same time providing a faster repair operation because the internal T is maintained by the other system.

By default, both systems are programmed for alternating operation so the wear of each group is reduced **to 50%** and component-life is extended to twice the standard solutions. the reliability is maximum and also allowing the repair of the fault group maintaining internal T of work.

BloodLine

CERTIFIED MEDICAL DEVICE CLASS IIA

Biological Bank -40°C -85°C

HPL

(High Performance Line)

KW -80°C BIOLOGICAL BANK SERIES HPL MEDICAL DEVICE DIRECTIVE 2007/47						
VERTICAL MODELS	K56S	K58S	K60S	K62S	K66S	K60S-2D
External dimensions (WxDxH)	cm115x79x188	cm132x80x184	cm132x97x184	cm141x90x199	cm110x103x199	cm132x97x184
Internal dimensions (WxDxH)	cm50x45x110	cm70x46x110	cm70x65x110	cm80x59x128	cm85x73x130	cm70x65x110
Set Point	-80°C	-80°C	-80°C	-80°C	-80°C	-80°C
Working range	-40°C -85°C	-40°C -85°C	-40°C -85°C	-40°C -85°C	-40°C -85°C	-40°C -85°C
Capacity (litres)	250	354	505	604	806	505
Pre painted steel closed doors	1	1	1	1	1	2
Shelves/inner doors	4/4	4/4	4/4	4/4	4/4	4/4
Weight Kg	350	400	430	450	540	430
Internal surfaces standard	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet
External surfaces standard	Prepainted steel	Prepainted steel	Prepainted steel	Prepainted steel	Prepainted steel	Prepainted steel
Insulation thickness	140mm	140mm	140mm	140mm	140mm	140mm
Key Lock	ST	ST	ST	ST	ST	ST
4 wheels (2 with brake)	ST	ST	ST	ST	ST	ST
(*) Controller HPL (display Touch Screen, Smart defrost, HT, LT, BLACK OUT, failure list, door open, switching on/off password, alarm memory, alarm test, SAFETY CONTROL, DISASTER RECOVERY, key alarm test, USB port, WI.FI, Ethernet wired)						
Controller HPL (*)	ST	ST	ST	ST	ST	ST
N°2 PT100 probe(-40°C/-130°C Class A)	ST	ST	ST	ST	ST	ST
RS485, USB Port and SD Card	ST	ST	ST	ST	ST	ST
SW KW TRACER	ST	ST	ST	ST	ST	ST
AVAILABLE ACCESSORIES						
Internal AISI 316 surfaces	√	√	√	√	√	√
External AISI 304 o AISI 316 surfaces	√	√	√	√	√	√
V.I.P. (vacuum insulation panel)	√	√	√	√	ST	√
N.° inox drawers H100 mm	(√)8	(√)8	(√)8	(√)8	(√)8	(√)8
N.° inox drawers H200 mm	(√)4	(√)4	(√)4	(√)4	(√)4	(√)4
Rack/Cak/COS	√	√	√	√	√	√
Additional shelves	√	√	√	√	√	√
Kit back up CO2 (24Vac/50Hz)	√	√	√	√	√	√
Kit back up LN2 (24Vac/50Hz)	√	√	√	√	√	√
Opening door by transponder personal key	√	√	√	√	√	√
Electrical key	√	√	√	√	√	√
Temperature recorder	√	√	√	√	√	√
GSM Port	√	√	√	√	√	√
Emergency plant CO2 (12Vac/25Hz) with temperature indipendent regulator	√	√	√	√	√	√
Additional PT100 probe (free contacts for external data management system: data logger wireless etc.)	√	√	√	√	√	√
Data logger WIFI+software/hardware (temperature management Spy KW)	√	√	√	√	√	√
Voltage stabilizer ± 35V (±15%)	√	√	√	√	√	√
IQ/QQ/ecc.	√	√	√	√	√	√
Water condenser	NO	NO	√	√	√	√
Internal - external hole	√	√	√	√	√	√

√	OPTIONAL
ST	STANDARD
NO	Not Available

BloodLine

Biological Bank -40°C -85°C

HPL

(High Performance Line)

KW -80°C BIOLOGICAL BANK SERIES HPL MEDICAL DEVICE DIRECTIVE 2007/47							
K62S-2D	K66S-2D	HORIZONTAL MODELS	K54S	K54ES	K55S	K55ES	K5578S
cm141x90x199	cm110x103x199	External dimensions (WxDxH)	cm167x86x124	cm167x86x124	cm237x88x112	cm298x86x117	cm290x96,5x112
cm80x59x128	cm85x73x130	Internal dimensions (WxDxH)	cm115x40x50	cm123x48x55	cm122x52x75	cm180x50x78	cm176x59,5x75
-80°C	-80°C	Set Point	-80°C	-80°C	-80°C	-80°C	-80°C
-40°C -85°C	-40°C -85°C	Working range	-40°C -85°C	-40°C -85°C	-40°C -85°C	-40°C -85°C	-40°C -85°C
604	806	Capacity (litres)	230	330	480	702	785
2	2	Pre painted steel closed doors	1	1	1	1	1
4/4	4/4	Shelves/inner doors	-	-	-	-	-
450	540	Weight Kg	380	400	420	520	520
AISI 304 stainless sheet	AISI 304 stainless sheet	Internal surfaces standard	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet
Prepainted steel	Prepainted steel	External surfaces standard	Prepainted steel	Prepainted steel	Prepainted steel	Prepainted steel	Prepainted steel
140mm	140mm	Insulation thickness	175mm	140mm	140mm	140mm	140mm
ST	ST	Key Lock	ST	ST	ST	ST	ST
ST	ST	4 wheels (2 with brake)	ST	ST	ST	ST	ST
(*) Controller HPL (display Touch Screen, Smart defrost, HT, LT, BLACK OUT, failure list, door open, switching on/off password, alarm memory, alarm test, SAFETY CONTROL, DISASTER RECOVERY, key alarm test, USB port, WI.FI, Ethernet wired)							
ST	ST	Controller HPL (*)	ST	ST	ST	ST	ST
ST	ST	N°2 PT100 probe(-40°C/-130°C Class A)	ST	ST	ST	ST	ST
ST	ST	RS485, USB Port and SD Card	ST	ST	ST	ST	ST
ST	ST	SW KW TRACER	ST	ST	ST	ST	ST
		AVAILABLE ACCESSORIES					
√	√	Internal AISI 316 surfaces	√	√	√	√	√
√	√	External AISI 304 o AISI 316 surfaces	√	√	√	√	√
√	ST	Rack/Cak/COS	√	√	√	√	√
(√)8	(√)8	Kit back up CO2 (24Vac/50Hz)	√	√	√	√	√
(√)4	(√)4	Kit back up LN2 (24Vac/50Hz)	√	√	√	√	√
√	√	Emergency plant CO2 (12Vac/25Hz)	√	√	√	√	√
√	√	Opening door by transponder personal key	√	√	√	√	√
√	√	Electrical key	√	√	√	√	√
√	√	Temperature recorder	√	√	√	√	√
√	√	GSM port	√	√	√	√	√
√	√	Additional PT100 probe	√	√	√	√	√
√	√	Data logger WIFI+software/hardware	√	√	√	√	√
√	√	(temperature management Spy KW)					
√	√	Voltage stabilizer ± 35V (±15%)	√	√	√	√	√
		IQ/QQ/ecc.	√	√	√	√	√
√	√	Water condenser	√	√	√	√	√
		Internal - external hole	√	√	√	√	√
√	√						
√	√						
√	√						
√	√						
√	√						

√	OPTIONAL
ST	STANDARD
NO	Not Available

CERTIFIED MEDICAL DEVICE CLASS IIA

BloodLine

Biological Bank -20°C -50°C

HPLL

(High Performance Line)

KW -40°C BIOLOGICAL BANK SERIES HPLL MEDICAL DEVICE DIRECTIVE 2007/47						
VERTICAL MODELS	K4056S	K4058S	K4060S	K4062S	K4066S	K4060S-2D
External dimensions (WxDxH)	cm115x79x188	cm132x80x184	cm132x97x184	cm141x90x199	cm110x103x199	cm132x97x184
Internal dimensions (WxDxH)	cm50x45x110	cm70x46x110	cm70x65x110	cm80x59x128	cm85x73x130	cm70x65x110
Set Point	-40°C	-40°C	-40°C	-40°C	-40°C	-40°C
Working range	-20°C -50°C	-20°C -50°C	-20°C -50°C	-20°C -50°C	-20°C -50°C	-20°C -50°C
Capacity (litres)	250	354	505	604	806	505
Pre painted steel closed doors	1	1	1	1	1	2
Shelves/inner doors	4/4	4/4	4/4	4/4	4/4	4/4
Weight Kg	350	400	430	450	540	430
Internal surfaces standard	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet
External surfaces standard	Prepainted steel	Prepainted steel	Prepainted steel	Prepainted steel	Prepainted steel	Prepainted steel
Insulation thickness	140mm	140mm	140mm	140mm	140mm	140mm
Key Lock	ST	ST	ST	ST	ST	ST
4 wheels (2 with brake)	ST	ST	ST	ST	ST	ST
(*) Controller HPL (display Touch Screen, Smart defrost, HT, LT, BLACK OUT, failure list, door open, switching on/off password, alarm memory, alarm test, SAFETY CONTROL, DISASTER RECOVERY, key alarm test, USB port, WI.FI, Ethernet wired)						
Controller HPL (*)	ST	ST	ST	ST	ST	ST
N°2 PT100 probe(-40°C/-130°C Class A)	ST	ST	ST	ST	ST	ST
RS485, USB Port and SD Card	ST	ST	ST	ST	ST	ST
SW KW TRACER	ST	ST	ST	ST	ST	ST
AVAILABLE ACCESSORIES						
Internal AISI 316 surfaces	√	√	√	√	√	√
External AISI 304 o AISI 316 surfaces	√	√	√	√	√	√
V.I.P. (vacuum insulation panel)	√	√	√	√	ST	√
N.° inox drawers H100 mm	(√)8	(√)8	(√)8	(√)8	(√)8	(√)8
N.° inox drawers H200 mm	(√)4	(√)4	(√)4	(√)4	(√)4	(√)4
Rack/Cak/COS	√	√	√	√	√	√
Additional shelves	√	√	√	√	√	√
Kit back up CO2 (24Vac/50Hz)	√	√	√	√	√	√
Kit back up LN2 (24Vac/50Hz)	√	√	√	√	√	√
Opening door by transponder personal key	√	√	√	√	√	√
Electrical key	√	√	√	√	√	√
Temperature recorder	√	√	√	√	√	√
GSM Port	√	√	√	√	√	√
Emergency plant CO2 (12Vac/25Hz) with temperature indipendent regulator	√	√	√	√	√	√
Additional PT100 probe (free contacts for external data management system: data logger wireless etc.)	√	√	√	√	√	√
Data logger WIFI+software/hardware (temperature management Spy KW)	√	√	√	√	√	√
Voltage stabilizer ± 35V (±15%)	√	√	√	√	√	√
IQ/QQ/ecc.	√	√	√	√	√	√
Water condenser	NO	NO	√	√	√	√
Internal - external hole	√	√	√	√	√	√

√	OPTIONAL
ST	STANDARD
NO	Not Available

BloodLine

Biological Bank -20°C -50°C

HPLL

(High Performance Line)

KW -40°C BIOLOGICAL BANK SERIES HPLL MEDICAL DEVICE DIRECTIVE 2007/47

K4062S-2D	K4066S-2D	HORIZONTAL MODELS	K4054S	K5404ES	K4055S	K4055ES	K405578S
cm141x90x199	cm110x103x199	External dimensions (WxDxH)	cm167x86x124	cm167x86x124	cm237x88x112	cm298x86x117	cm290x96,5x112
cm80x59x128	cm85x73x130	Internal dimensions (WxDxH)	cm115x40x50	cm123x48x55	cm122x52x75	cm180x50x78	cm176x59,5x75
-40°C	-40°C	Set Point	-40°C	-40°C	-40°C	-40°C	-40°C
-20°C -50°C	-20°C -50°C	Working range	-20°C -50°C	-20°C -50°C	-20°C -50°C	-20°C -50°C	-20°C -50°C
604	806	Capacity (litres)	230	330	480	702	785
2	2	Pre painted steel closed doors	1	1	1	1	1
4/4	4/4	Shelves/inner doors	-	-	-	-	-
450	540	Weight Kg	380	400	420	520	520
AISI 304 stainless sheet	AISI 304 stainless sheet	Internal surfaces standard	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet
Prepainted steel	Prepainted steel	External surfaces standard	Prepainted steel	Prepainted steel	Prepainted steel	Prepainted steel	Prepainted steel
140mm	140mm	Insulation thickness	175mm	140mm	140mm	140mm	140mm
ST	ST	Key Lock	ST	ST	ST	ST	ST
ST	ST	4 wheels (2 with brake)	ST	ST	ST	ST	ST
(*) Controller HPL (display Touch Screen, Smart defrost, HT, LT, BLACK OUT, failure list, door open, switching on/off password, alarm memory, alarm test, SAFETY CONTROL, DISASTER RECOVERY, key alarm test, USB port, WI.FI, Ethernet wired)							
ST	ST	Controller HPL (*)	ST	ST	ST	ST	ST
ST	ST	N°2 PT100 probe(-40°C/-130°C Class A)	ST	ST	ST	ST	ST
ST	ST	RS485, USB Port and SD Card	ST	ST	ST	ST	ST
ST	ST	SW KW TRACER	ST	ST	ST	ST	ST
		AVAILABLE ACCESSORIES					
√	√	Internal AISI 316 surfaces	√	√	√	√	√
√	√	External AISI 304 o AISI 316 surfaces	√	√	√	√	√
√	ST	Rack/Cak/COS	√	√	√	√	√
(√)8	(√)8	Kit back up CO2 (24Vac/50Hz)	√	√	√	√	√
(√)4	(√)4	Kit back up LN2 (24Vac/50Hz)	√	√	√	√	√
√	√	Emergency plant CO2 (12Vac/25Hz)	√	√	√	√	√
√	√	Opening door by transponder personal key	√	√	√	√	√
√	√	Electrical key	√	√	√	√	√
√	√	Temperature recorder	√	√	√	√	√
√	√	GSM port	√	√	√	√	√
√	√	Additional PT100 probe	√	√	√	√	√
√	√	Data logger WIFI+software/hardware	√	√	√	√	√
√	√	(temperature management Spy KW)					
√	√	Voltage stabilizer ± 35V (±15%)	√	√	√	√	√
		IQ/QQ/ecc.	√	√	√	√	√
		Water condenser	√	√	√	√	√
√	√	Internal - external hole	√	√	√	√	√
√	√						
√	√						
√	√						
√	√						
√	√						

√	OPTIONAL
ST	STANDARD
NO	Not Available

KW BIRTHDAY 60 years!

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